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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/903,010 | 07/11/2001 | Shingo Kataoka | 0941.65687 | 9056 |

7590 10/20/2004
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EXAMINER

SEFER, AHMED N

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2826

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,010

Applicant(s)

KATAOKA ET AL.

Examiner

A. Sefer

Art Unit

2826



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-38, 73 and 74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-38, 73 and 74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed August 4, 2004 has been entered; no new claims have been introduced.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of claim 24 "... in said driving state ... patterns on said first electrode." has insufficient antecedent basis in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Art Unit: 2826

5. Claims 24-34, 36, 37 and 74, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al. ("Takeda") USPN 6,724,452.

Takeda discloses (see figs. 9, 44-46, 53, 63, 217 and 221) liquid crystal display device comprising: a first substrate 17/92; a second substrate 16/91 facing said first substrate; a liquid crystal layer sealed between said first substrate and said second substrate; a first electrode 13 formed on said first substrate; a second electrode 12 formed said second substrate; a first molecule orientation film formed on said first substrate so as to cover said first electrode; a second molecule orientation film formed on said second substrate so as to cover said second electrode(col. 87, lines 22-30); a first polarizing plate 15 arranged outside of said first substrate; and a second polarizing plate 11 arranged outside of said second substrate in a crossed Nicol state (col. 57, lines 44-48) to said first polarizing plate, wherein: in a non-driving state in which a driving voltage is not applied between said first electrode and said second electrode, liquid crystal molecules are oriented in a vertical direction to said first substrate and said second substrate by said first molecule orientation film and said second molecule orientation film, respectively; on said first electrode, electrode patterns 20, which extend in a first direction parallel to a surface of said liquid crystal layer, are periodically repeated to be arranged at intervals of a first width in a second direction, which said second direction is parallel to the surface of said liquid crystal layer and is vertical to said first direction; said electrode patterns, which are repeated to be arranged in said second direction, are mutually connected each other by connectors 52; on said first electrode, a cutout pattern 21 extending in said second direction is formed at substantially a greater second width than said first width; and said liquid crystal

Art Unit: 2826

molecules substantially tilt in said first direction in said driving state on and among said electrode patterns on said first electrode.

As for claim 25, Takeda discloses (fig. 44) each of said electrode patterns 20 is spaced from another electrode pattern adjacent and corresponding thereto in said first direction, by said cutout pattern 21.

As for claims 26 and 33, Takeda discloses (figs. 58, 72 and 73) on said second substrate, rough patterns 20A made up of convex patterns (as in claim 32) extending in a second direction being formed so as to cross electrode patterns 20B at a view from a vertical direction to a first substrate, and said electrode patterns adjacent to and corresponding to other electrode patterns 32 in said second direction and at least a part of said connector 52 are arranged under said rough patterns at said view from said vertical direction to said first substrate.

As for claim 27, Takeda discloses (fig. 55) at least a part of said electrode patterns further mutually connects along an edge of an opening part of a pixel electrode 13.

As for claim 28, Takeda et al disclose (fig. 55) each of said electrode patterns has a tapered shape in said first direction.

As for claim 29, Takeda discloses (fig. 55) each of said electrode patterns has a shape which width becomes narrower toward a top edge in a step-wise shape.

As for claim 30, Takeda discloses (figs. 78-81) third electrode patterns 35 are formed so as to extend along said cutout patterns at a same electric potential as said second electrode under said first electrode.

As for claim 31, Takeda discloses (figs. 55 and 78-81) on said first electrode, a first region and a second region are formed so that said first direction in said first region vertically

Art Unit: 2826

crosses said first direction in said second region; and said third electrode 35 extends along said first region and the second region on said first substrate.

As for claims 32, Takeda discloses (figs. 58, 72 and 73) rough patterns comprising repeated patterns in said first direction, in which said repeated patterns are repeated in said second direction at intervals of a period begin same as or equal to a repeat period in said second direction of said electrode patterns.

As for claim 34, Takeda discloses (figs. 55 and 78) a first electrode comprising a first region where said electrode patterns are repeated and a second region which is covered with a uniform conducting film.

As for claims 36 and 37, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

As for claim 74, Takeda discloses (fig. 71) a thin film transistor 33 formed so as to correspond to each pixel electrodes and drives each of said pixel electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Art Unit: 2826

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS

October 7, 2004



NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800